

REMARKS

Claims 1-16, 22, 24-26 were pending, of which Claims 9-16, 22 and 25 were indicated as being allowable. Claims 1-3, 8 and 24 were rejected and Claims 4-7 and 26 were objected to. Reconsideration is requested.

Comments on Examiner's Response to Amendments and Arguments

The Examiner indicated that the Applicant's previous arguments are persuasive. Applicant stands by the statements made in the previous Response, but believes clarification of the Examiner's characterization of Applicant's statements is necessary. The Examiner stated that Applicant pointed out that "recipe" "corresponds to, *inter alia*, a stored image or pattern that is used by pattern recognition systems to locate a des-skew site (see Applicant's remarks, p. 6); it does not correspond to a method for performing a given task, in accordance with the plain meaning of 'recipc.'"

Contrary to the Examiner's characterization, Applicant did not say that a recipe cannot be "a method for performing a given task". Applicant pointed out that Claim 1 recites "a method of forming a recipe for de-skewing wafers", while Hennessey discloses a method of determining misregistration. To use the Examiner's words, Hennessey discloses "performing a given task", i.e., determining misregistration", while Claim 1 is related to "forming a recipe" to perform a given task, i.e., de-skewing wafers. See, the paragraph that bridges page 6 and 7 of the Response to Office Action dated August 3, 2006.

Claim Rejections – 35 U.S.C. §102

Claims 1, 8, and 24 were rejected under 35 U.S.C. §102(e) as being anticipated by Scheiner et al. (6,556,947) ("Scheiner"). Applicant requests reconsideration.

Scheiner is related to "optical measurement of patterned structures". See, Title. Scheiner notes that to locate a "measurement site, a wafer alignment procedure is typically performed using pattern recognition features." Col. 7, line 66-col. 8, line 1. Scheiner further notes that the "alignment related information possibly includes an alignment feature type and coordinates, and is stored in the recipe design file to be used for further measurements in successive dies of this or similar wafer." Col. 8, line 2-5, and see, col. 2, line 3-8.

Scheiner, however, does not provide any details on the alignment feature or the alignment procedure, other than stating that "[t]he alignment feature is a unique feature

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(pattern element) which is present in each of the wafer dies. To locate the alignment feature, a suitable pattern recognition technique is used, which location includes coordinates of the alignment feature and its relative location to any selected sites (i.e., the die's dimensions and the space between two locally adjacent dies). Col. 1, lines 27-34. Scheiner does not teach or suggest "learning a first pattern at a de-skew site on a first wafer layer" and "learning a second pattern at the de-skew site on a second wafer layer" along with the other elements of Claim 1.

The Examiner relies on the fact that Scheiner measures multiple layers of a golden wafer to generate a library (reference data), as teaching "learning a first pattern at a de-skew site on a first wafer layer" and "learning a second pattern at the de-skew site on a second wafer layer". Applicant disagrees.

There is no disclosure in Scheiner, that an alignment feature is "learned" at multiple layers on the golden wafer. Scheiner measures multiple layers of a golden wafer to obtain the information that is necessary to optically model the thickness of the site. Scheiner, for example, repeatedly notes that the reference data includes information such as "the number of layers; optical characteristics (defined by the layer materials and thickness values), geometric characteristics (feature's dimensions), etc." Col. 2, lines 28-33; and see, col. 3, lines 8-24; Fig. 3 and col. 5, line 65-col. 6, line 25; col. 6, lines 31-47. This information is used to optically model the site. See, col. 2, lines 19-24; and see col. 7, lines 28-32. There is no disclosure that this information should contain the alignment feature at different wafer layers.

Moreover, there is no reason that the library (reference data) in Scheiner would contain the alignment feature at different wafer layers. Scheiner is related to measuring a characteristic of a patterned article on a wafer that is at a particular manufacturing state. For example, Scheiner is related to measuring the patterned structure 2, shown in Figs. 1A and 1B. Applicant's attorney is not aware of any disclosure that Scheiner is related to measuring a characteristic of a patterned article at various manufacturing states of the wafer, i.e., at different wafer layers. Thus, while Scheiner's library (reference data) contains information about underlying layers, the library is used to optically model the wafer only when the wafer has reached one particular manufacturing state, e.g., as illustrated in Fig. 1A; and, therefore, there is no reason that underlying alignment features would be learned and stored.

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Accordingly, Applicant respectfully submits that Claim 1 is patentable over Scheiner. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 8 and 24 depend from Claim 1 and is therefore likewise patentable for at least the same reasons.

Claim Rejections – 35 U.S.C. §103

Claims 2 and 3 were rejected under 35 U.S.C. §103(a) as being unpatentable over Scheiner in view of Garakani et al. (6,240,208) (“Garakani”). Applicant respectfully traverses.

Claims 2 and 3 depend from Claim 1. Garakani fails to make up for the deficiencies of Scheiner. Accordingly, Claims 2 and 3 are allowable for at least the same reasons as Claim 1.

No amendments were made and Claims 1-16 and 22-26 remain pending. For the above reasons, Applicant respectfully requests allowance of Claims 1-16 and 22-26. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (408) 982-8202.

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office to the fax number 571-273-8300 on January 20, 2007.

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Respectfully submitted,

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